ELSEVIER

Volume 278 Numbers 1–2, 21 August 1998

Journal of ALLOYS AND COMPOUNDS

Contents

Letters

Crystallographic data of new ternary La_2Sb-type GdScSi, GdScGe, TbScGe compounds, Ti_5Ga_4-type RScSi (R=Tb-Tm) and RScGe (R=Dy-Tm) compounds L1
A.V. Morozkin, Yu.D. Seropegin, V.K. Portnoy, A.V. Leonov, I.A. Sviridov (Moscow, Russia)

Refinement of the crystal structure of $NdGe_2Ni_2$ L6
L. Zeng, H.F. Franzen (Ames, IA, USA)

Crystallographic data of new ternary Sm_5Ge_4-type $R_2Ti_3Ge_4$ compounds (R=Gd-Er) L8
A.V. Morozkin, Yu.D. Seropegin, V.K. Portnoy, A.V. Leonov, I.A. Sviridov (Moscow, Russia)

Preparation of single crystals of LaAl and X-ray structure determination L10
A. Leineweber, H. Jacobs (Dortmund, Germany)

Physics

Unusual electrical resistivity anomalies of thulium thin films at low temperatures 1
J. Dudáš, A. Feher, V. Kavečanský (Košice, Slovak Republic)

Synthesis, structural and magnetic properties of the interstitial compounds $RCo_9Si_2C_x$ with R=Sm, Nd, Y and $0 \leq x \leq 1.8$ 6
B. Garcia-Landa (Grenoble, France and Zaragoza, Spain), D. Fruchart, D. Gignoux (Grenoble, France), R. Skolozdra (Grenoble, France and L'viv, Ukraine), J.L. Soubeyroux (Grenoble, France)

Volume expansion and Curie temperature enhancement in $R_3(Fe, M)_{29}$ (M=Mo and V) and their nitrides 17
J. Hu, L. Mei, K. Luan (Jinan, P.R. China), F. Yang, H. Pan, X. Han, J. Wang (Beijing, P.R. China)

Nuclear magnetic resonance study of the electronic structure and hydrogen diffusion in the random b.c.c. V_yTa_{1-y}-H(D) system 21
D.S. Sibirtsev, Yu.G. Cherepanov, A.V. Skripov (Ekaterinburg, Russia)

Growth of crystals, composite crystal structures and electrical resistance of high-pressure phases of Mg_2B_{1+x} (B=Sn,Ge) . . . 29
N.B. Bolotina (Moscow, Russian Federation), T.I. Dyuzheva, N.A. Bendeliani (Troitsk, Moscow Region, Russian Federation), V. Petricek (Prague, Czech Republic), A.E. Petrova (Troitsk, Moscow Region, Russian Federation), V.I. Simonov (Moscow, Russian Federation)

A study of the crystallographic and magnetic properties of $Dy_{1-x}Y_xFe_{11}Mo(x=0–1.0)$ 34
C.-P. Yang, Y.-Z. Wang, B.-P. Hu, W.-Y. Lai, Z.-X. Wang (Beijing, P.R. China)

Transport properties of RuSi, RuGe, OsSi, and quasi-binary alloys of these compounds 39
H. Hohl, A.P. Ramirez, C. Goldmann, G. Ernst, E. Bucher (Murray Hill, NJ, USA)

Effects of hydrogen absorption on the magnetic properties of $Y(Co_{0.925}Al_{0.075})_2H_x$ 44
N.V. Mushnikov (Tokyo, Japan and Ekaterinburg, Russia), T. Goto (Tokyo, Japan), V.S. Gaviko, N.K. Zajkov, A.V. Ilyushenko (Ekaterinburg, Russia)

Magnetic and electrical properties of $Sc(M_{1-x}Si_x)_{2-y}$ (M=Fe, Co, Ni) 49
B.Ya. Kotur (Lviv, Ukraine), E. Gratz, E. Bauer, G. Hilscher, A. Kottar, H. Michor, Ch. Reichl, G. Wiesinger (Vienna, Austria), A.S. Markosyan (Moscow, Russia)

Hyperfine fields and Fe magnetic moments in Fe-Rh alloys; a Mössbauer spectroscopy study 60
G. Filoti (Bucharest, Romania), V. Kuncsea, E. Navarro, A. Hernando (Madrid, Spain), M. Rosenberg (Bochum, Germany)

Magnetic properties of rare earth compounds of the type $GdCo_{5-x}B_x$ 69
Z.G. Zhao, F.R. de Boer, K.H.J. Buschow (Amsterdam, The Netherlands)

Spin and valence fluctuations in $CeMn_4Al_8$ and $CeMn_6Al_6$ 72
M. Coldea (Cluj-Napoca, Romania), M. Neumann, S. Lütkehoff, S. Mähl (Osnabrück, Germany), R. Coldea (Cluj-Napoca, Romania)

Magnetic properties of RFe_4Al_8 compounds studied by specific heat measurements 80
I.H. Hagmusa, E. Brück, F.R. de Boer, K.H.J. Buschow (Amsterdam, The Netherlands)

Elsevier Science S.A.

Chemistry

Rietveld refinement studies of Nb_4N_5- and Nb_5N_6-related phases in the (Mn)–Nb–O–N system 83
A. Tyutyunnik (Ekaterinburg, Russia), J. Grins, G. Svensson (Stockholm, Sweden)

Luminescence study on the inner-sphere hydration number of lanthanide(III) ions in concentrated aqueous salt solutions in fluid and frozen states 92
T. Kimura, Y. Kato (Ibaraki, Japan)

Synthesis and structure of $Ln_4Re_{6-x}O_{19}$ (Ln=Ce, Pr, Nd) complex oxides 98
K.G. Bramnik, A.M. Abakumov, R.V. Shpanchenko, E.V. Antipov, G. Van Tendeloo (Moscow, Russia)

Measurement and modelling of hydriding and dehydriding kinetics 103
A. Inomata, H. Aoki, T. Miura (Sendai, Japan)

Solvent–thermal preparation of nanocrystalline pyrite cobalt disulfide 110
X.F. Qian, X.M. Zhang, C. Wang, K.B. Tang, Y. Xie, Y.T. Qian (Anhui, P.R. China)

Thermodynamic study of the CsCl–$NdCl_3$ system by Knudsen effusion mass spectrometry 113
I. Lisek, J. Kapała, M. Miller (Wrocław, Poland)

Synthesis, characterization, and electronic structure of $KV_3Te_3O_{0.42}$ 123
E.J. Wu, M.A. Pell, H.S. Genin, J.A. Ibers (Evanston, IL, USA)

Microwave plasma chemical vapour deposition of diamond like carbon thin films 130
D.S. Patil, K. Ramachandran, N. Venkatramani, M. Pandey, S. Venkateswaran, R. D'Cunha (Mumbai, India)

Thermal evolution of nanosized $LaFeO_3$ powders from a heteronuclear complex, $La[Fe(CN)_6]\cdot nH_2O$ 135
Y. Sadaoka, H. Aono (Matsuyama, Japan), E. Traversa (Rome, Italy), M. Sakamoto (Yamagata, Japan)

Photoluminescence study of layered niobates intercalated with Eu^{3+} ions 142
V.R.L. Constantino, M.A. Bizeto, H.F. Brito (São Paulo, Brazil)

Corrosion of uranium in air and water vapor: consequences for environmental dispersal 149
J.M. Haschke (Los Alamos, NM, USA)

The high-temperature (β) modification of Y_4C_7 with Lu_4C_7 type and Dy_3C_4 with Sc_3C_4 type structure 161
T. Hüfken, W. Jeitschko (Münster, Germany)

Crystal chemical study of the high-temperature phase $R(O,F)_{1.93\pm\delta}$ with R=Tm, Yb and Lu. Professor Dr. Georg Brauer on the occasion of his 90th birthday 165
J.-H. Müller, T. Petzel, B. Hormann, O. Greis (Hamburg, Germany)

New ternary phosphides $Ln_{3-x}Cu_{8-y}P_8$ (Ln=Y, Gd, Tb, Dy, Ho, Er, Tm) and their crystal structure 169
Yu.B. Kuz'ma, S.I. Chykhrij (L'viv, Ukraine), Yu.A. Mozharivsky (L'viv, Ukraine and Mainz, Germany), W. Tremel (Mainz, Germany), R.O. Demchyna (L'viv, Ukraine)

Metallurgy

Assessment of size effect on the surface properties of some binary liquid alloys 175
B.C. Anusionwu (Owerri, Nigeria), O. Akinlade (Abeokuta, Nigeria), L.A. Hussain (Ibadan, Nigeria)

A thermodynamic assessment of the Ni–Sm system 182
X. Su, W. Zhang, Z. Du (Beijing, P.R. China)

Calorimetric study of the Hf–Os and Os–Ti systems 185
K. Mahdouk, J.-C. Gachon (Vandœuvre lès Nancy, France)

On the $ß_2$ to α-phase transformation in a Cu–Zn–Al-based shape memory alloy 190
L.G. Bujoreanu, M.L. Craus, I. Rusu, S. Stanciu, D. Sutiman (Iaşi, Romania)

Proposal for new indexes describing the degree of hysteresis and those applications to the $ZrMn_2$–H_2 systems 194
T. Kodama (Hyogo-ken, Japan)

Structures, properties and responses to heat treatment of Cu–Y alloys prepared by mechanical alloying 201
L.K. Tan, Y. Li, S.C. Ng, L. Lu (Singapore, Singapore)

Characterisation of microstructure of isothermal martensite in Fe–23Ni–3.8Mn by Rietveld method 209
H. Pal, A. Chanda, M. De (Calcutta, India)

Analysis of the phase diagram and thermochemistry in the Ta–N and the Ta–C–N systems 216
K. Frisk (Stockholm, Sweden)

The neodymium–zinc–(silicon, germanium) systems 227
P. Salamakha, P. Demchenko, O. Sologub, O. Bodak (L'viv, Ukraine)

Phase stability and fcc/hcp martensitic transformation in Fe–Mn–Si alloys. Part I. Experimental study and systematics of the M_S and A_S temperatures 231
S. Cotes (Bariloche, Argentina), A.F. Guillermet (Bariloche and Conicet, Argentina), M. Sade (Bariloche, Argentina)

Structural study of the rare-earth transition-metal intermetallic compound $Nd_3Ni_{29}Si_4B_{10}$ 239
H. Zhang, E. Wu, S.J. Campbell (Canberra, Australia), S.J. Kennedy (Menai, Australia), H.-S. Li (Sydney, Australia), A.J. Studer (Menai, Australia), S.R. Bulcock, A.D. Rae (Canberra, Australia)

Crystal structure of $YbMn_{\sim 0.17}Si_{\sim 1.83}$: a new AlB_2–$BaAl_4$ intergrowth compound 246
N.M. Norlidah, I. Ijjaali, G. Venturini, B. Malaman (Vandoeuvre lès Nancy, France)

Neutron diffraction studies of Zr-containing intermetallic hydrides with ordered hydrogen sublattice. II. Orthorhombic $Zr_3FeD_{6.7}$ with filled Re_3B-type structure 252
V.A. Yartys (Kjeller, Norway and L'viv, Ukraine), H. Fjellvåg (Kjeller and Oslo, Norway), B.C. Hauback (Kjeller, Norway), A.B. Riabov (L'viv, Ukraine), M.H. Sørby (Kjeller and Oslo, Norway)

Materials Science

Magnetic properties of two-phase magnets; a model approach 260
A. Szlaferek (Poznań, Poland)

Fe or Co–Fe alloy/manganese ferrite composites 264
G. Pourroy (Strasbourg, France)

The hydriding kinetics of $LaNi_{4.5}Al_{0.5}$ with hydrogen 270
J.W. Oh, C.Y. Kim, K.S. Nahm (Chonju, South Korea), K.S. Sim (Daejon, South Korea)

Thermal expansion and thermal conductivity of Cs_2CrO_4 277
M. Takano, K. Minato, K. Fukuda (Ibaraki-ken, Japan), S. Sato, H. Ohashi (Hokkaido, Japan)

The effects of partial substitution of Mn by Cr on the electrochemical cycle life of Ti-Zr-V-Mn-Ni alloy electrodes of a Ni/MH battery 283
J.-S. Yu, B.-H. Liu, K. Cho, J.-Y. Lee (Taejon, South Korea)

^{57}Fe Mössbauer, FT–IR and TEM investigations of Fe-oxide powders obtained from concentrated $FeCl_3$ solutions 291
S. Musić (Zagreb, Croatia), G.P. Santana (Belo Horizonte, Brazil), G. Šmit (Osijek, Croatia), V.K. Garg (Brasilia, Brazil)

Author Index of Volume 278 303

Subject Index of Volume 278 305

CONTENTS DIRECT

ContentsDirect, the ***free*** e-mail alerting service, delivers the table of contents for this journal directly to your PC, prior to publication. The quickest way to register for **ContentsDirect** is via the Internet at: **http://www.elsevier.nl/locate/ContentsDirect**. If you don't have access to the Internet you can register for this service by sending an e-mail message to cdsubs@elsevier.co.uk – specifying the title of the publication you wish to register for.